

ABSTRACT

In some exemplary embodiments of the invention, a transfer function of a filter for a fractional-N sigma-delta modulator may be calculated to be optimized according to predefined optimization criteria. For example, the optimization criteria may include spectral cleanliness at the output of the modulator, or the mean squared error of the input to the filter and the input to a voltage controlled oscillator of the fractional-N phase locked loop (PLL). In some exemplary embodiments, the filter may be adjusted to compensate for variations and/or impairments in the analog fractional-N PLL. A non-exhaustive list of examples for the transfer function includes a finite impulse response and an infinite impulse response.